REMARKS/ARGUMENTS

Claims 1 – 7 were in the application as originally filed. The Examiner has objected to claim 7 based on certain informalities. Claims 1 – 6 have been rejected under 35 U.S.C. §112, second paragraph, as being incomplete. The Examiner has also rejected claim 7 under 35 U.S.C. §102(b) as being anticipated by Laing, et al., 5,399,975. Claims 1 – 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gabele, et al., 5,991,521 in view of Laing, et al. Applicants respectfully traverse the objections and rejections, based on the amendments herein and the following remarks.

With respect to the Examiner's objection to claim 7, Applicants have amended claim 7 in accordance with the Examiner's suggestion.

With respect to the Section 112, second paragraph rejection of claims 1 – 6, the Examiner stated that the omitted step was the step that shows how the faulty connection is restored. Applicants respectfully submit that the claim as originally filed was in compliance with Section 112, second paragraph, in that the restoration of the faulty connection occurs by the application of the voltage signal to the connecting pins which show an apparent disconnection to the memory circuit element. That is, the disconnection is "apparent," because it may have resulted from the device being subjected to high temperatures over periods of time. In fact, if it was a complete disconnection, Applicants fully understand that the application of the voltage signal to disconnected connecting pins would be of no consequence. However, with the type of fault as described in the patent application specification, the application of the voltage signal restores the integrated circuit device to appropriate operation. Notwithstanding the foregoing, and for purposes of clarity, Applicants have amended claim 1 so as to further define the method as including the connection of a voltage generating device to the connecting pins which appear to be disconnected. Also, Applicants have further amended claim 1 so as to define the voltage signals as being applied to the connecting pins for a predetermined period of time.

Each of claims 2 – 6 is directly or indirectly dependent from claim 1. With the statements set forth herein with respect to claim 1, and the amendments made to claim 1, Applicants respectfully submit that claim 1 is now in compliance with all requirements of Section 112, second paragraph. Further, Applicants respectfully submit that each of claims 2 – 6 is also in compliance with Section 112, second paragraph.

Applicants respectfully traverse the rejection of claim 7 as being anticipated by Laing, et al.

The Laing, et al. patent discloses a method of testing electrical conductivity of a connection between an integrated circuit device and a circuit board to which the device is connected. The method includes steps which include the application of a potential of a first amount to a connection, and the application of a potential of a second differing amount to the connection. A probe is then positioned adjacent the device, so as to sense current indirectly in the current path. The presence of the current indicates that the connection being tested is conductive.

Applicants respectfully submit that Laing, et al. do not teach nor suggest Applicants' invention as defined in claim 7 as amended. Applicants' invention is not directed to detecting or otherwise testing connection continuity. Instead, Applicants' invention as defined in claim 7 is directed to a method for "restoring" faulty elements internal to the integrated circuit device. That is, the application of a voltage signal of a predefined level to the external connecting pin defined in claim 7 produces a restoration of appropriate operation of the integrated circuit device. This is not a situation which only involves a method for detecting faults. Applicants have found, as what can be characterized as surprising results, that the application of the voltage signal actually restores proper operation of the circuit device. For these reasons, Applicants respectfully submit that claim 7 as amended is not taught by Laing, et al.

Applicants respectfully traverse the rejection of claims 1 – 7 as being unpatentable over Gabele, et al. in view of Laing, et al.

The Gabele, et al. patent discloses a method and system for checking for open circuit connections with in an integrated circuit design. The design is represented by a hierarchical data structure.

Applicants respectfully traverse the alleged combination of Gabele, et al. and Laing, et al. Applicants submit that there is no teaching or suggestion in Gabele, et al. to apply voltage signals to certain of connecting pins. Further, Laing, et al. neither teaches nor suggests the use of its method of testing continuity of a connection to a configuration such as Gabele, et al. For these reasons, Applicants respectfully submit that Gabele, et al. and Laing, et al. can not be tenably combined.

Assuming, arguendo, that Gabele, et al. and Laing, et al. can be combined, Applicants respectfully submit that the alleged combination still does not teach or suggest Applicants' invention as defined in claims 1- 6 as amended. As earlier stated, Applicants' method as defined in claim 1 is a method for "restoring" a faulty connection within an integrated circuit device. The method does not, in any manner, only detect a faulty connection. It is the application of the voltage signal to the connecting pins which appear to have a fault, which is a novel and unobvious concept embodied within Applicants' invention.

In contrast, neither Gabele, et al. nor Laing, et al., taken either singularly or in an alleged combination, restore faulty connections by application of voltage signals to certain connecting pins. For these reasons, Applicants respectfully submit that the alleged combination of Gabele, et al. and Laing, et al. does not teach or suggest Applicants' invention as defined in claim 1 as amended.

Each of claims 2 – 6 is directly or indirectly dependent from claim 1. For the reasons set forth herein that claim 1 as amended is patentable over the alleged combination of

Gabele, et al. and Laing, et al., Applicants respectfully submit that each of dependent claims 2 – 6 is also patentable over the alleged combination.

In view of the amendments to the claims and the remarks set forth herein, Applicants respectfully submit that each of claims 1 – 7, as amended, is now in condition for allowance, and early notification of allowability is respectfully requested. Should any question arise in connection with the above, please contact Thomas L. Lockhart at the telephone number of (616) 336-6000.

Respectfully submitted,

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